Achieve, Inc.

September 24, 2007

Dr. Nancy S. Grasmick
Maryland State Superintendent of Schools
Maryland State Department of Education
200 West Baltimore Street
Baltimore, MD 21201

Dear Dr. Grasmick:

Achieve has completed a Quality Review of the alignment of the *Maryland Voluntary State Curriculum (VSC) – High School English (April 2007) and Mathematics (June 2007)*. The primary purpose of this review is to ensure that the state's academic standards align the expectations for exiting high school with the expectations for success in college and the workplace. The ADP Benchmarks to which these Maryland standards were compared represent the knowledge and skills required for successful entry into credit-bearing college courses and quality jobs. A secondary purpose of this review is to ensure that the Maryland standards meet the criteria of high quality standards that include rigor, focus, coherence, specificity, clarity, and measurability.

Maryland's standards measure up very well on both counts. The *Maryland Voluntary State Curriculum – High School English (April 2007) and Mathematics (June 2007)* present student learning expectations that are intellectually demanding and well aligned with the ADP Benchmarks in English language arts and mathematics. If Maryland students master the state standards, they will likely be well prepared for both workplace and college success.

Summary of Findings in English

- *The Maryland Voluntary State Curriculum – High School English (April 2007) is well aligned to the ADP Benchmarks.* The state has addressed the gaps noted in previous reviews, and the VSC includes the skills that are recognized as critical for success in college and the workplace. The VSC provides a clear focus on work-related reading and writing and other critical areas of teamwork, oral presentations, and peer response. Elements of research and logic have been fully

addressed in ways likely to deepen students' understanding of inquiry and presentation of findings. In addition, the VSC now includes a set of recommended authors that provide guidance for the state's English classrooms in terms of identifying appropriate texts for high school students.

- *The Maryland Voluntary State Curriculum – High School English (April 2007) exhibits the criteria of high quality standards.* The rigor, focus, coherence, specificity, clarity, and measurability of the expectations are strong. Specifically, the state has addressed prior challenges to measurability by reviewing the performances required in its Content Targets. Though minor revisions may still be made, the potential for effectively evaluating these expectations has increased substantially. The 2007 document now includes asterisks to identify those elements of the VSC that are Assessment Limits, the descriptors of what may appear on a state test. The elements of an effective system are now interrelated; the standards prescribe the test, the test measures learning, and that measurement contributes to each school's profile.

- *The reorganization of the Maryland Voluntary State Curriculum – High School English (April 2007) into strands and the progression of skills articulated throughout these strands clearly communicate expectations to teachers, curriculum developers, assessment developers, and the general public.* The VSC content expectations have been completely reorganized into the six strands of Comprehension and Interpretation of Text, Analysis and Evaluation of Text, Composing, Controlling Language, Speaking, and Listening. The meaningful and logical progression of skills encourages a level of increasing demand and objectives are differentiated for the grade spans 9 – 10 and 11 – 12.

Summary of Findings in Mathematics

- *The Maryland Voluntary State Curriculum – High School Mathematics (June 2007) is well aligned to the ADP Benchmarks.* In response to Achieve's suggestions, Maryland has made a number of improvements. It has expanded and enhanced its VSC by adding Additional Topics to its Algebra/Data Analysis, Geometry, and Algebra II VSC. The revised version includes introductory text that clarifies not only format and purpose but also the importance of problem solving, reasoning and the use of technology. The state now also includes on a Web site publicly-released assessment items to help clarify the intended level of rigor of at least some of the VSC.

- *The Maryland Voluntary State Curriculum – High School Mathematics (June 2007) exhibits the criteria of high quality standards.* The VSC is rigorous, clear, specific, coherent, focused, and measurable. The substance, format, and language of the VSC are comprehensive and well articulated. A variety of education constituencies have been involved in its development, helping to ensure that the

- document is useful and addresses the needs of diverse education audiences. The VSC provides a solid basis for local school districts to use as they develop courses and benchmark their existing high school course descriptions to the state standards.

- *Maryland has developed ancillary structures to support its standards.* Maryland has chosen not to use more specific language or examples within its standards to clarify their intent. Rather, the state has opted to rely upon the use of public release items and other support materials contained within a Web-based toolkit. The toolkit for Pre-kindergarten – Grade 8 appears to be rich with a variety of resources including lesson plans, lesson seeds, sample assessments, resources, and public release items. Tools for high school are not yet as comprehensive and will need to be further developed to include public release items, instructional activities, lesson plans, and other exemplars that will support and clarify the Algebra II VSC and the Additional Topics now written into the VSC.

By successfully completing these standards, Maryland has taken an important step to better prepare young people for success in postsecondary education and in their careers. My colleagues and I at Achieve look forward to continuing to support your efforts to ensure that the expectations of high school students reflect the real world demands they will face upon graduation.

Sincerely

Michael Cohen

cc: The Honorable Martin O'Malley
Governor

William E. Kirwan
Chancellor, University System of Maryland

June Streckfus
Executive Director, Maryland Business Roundtable for Education

Enclosures

Maryland Achieve Quality Review II
Detailed Comments from English Language Arts Review Panel
Enclosure A

Documents Reviewed

In this final Quality Review (Phase II), Achieve focused primarily on how the Maryland Voluntary State Curriculum - High School English (VSC) aligns with the Achieve ADP Benchmarks for English but considered as well the Achieve criteria for standards that include coherence, focus, specificity, clarity, and measurability.

The documents considered for this review supplied by the state included the Maryland Voluntary State Curriculum - High School English (April 2007) and an author list. Also, Achieve considered Quality Review I, prepared for Maryland by Achieve, dated June 1, 2006.

In Quality Review I, major issues raised about the quality of the 2006 VSC were focused on the measurability of some expectations, the organization of the document, and the alignment to the ADP Benchmarks. Every issue raised by Achieve in this earlier review has been addressed specifically, effectively, and thoroughly. This new state document reflects the professional commitment of the Maryland Department of Education to raise its expectations of all students to be ready to meet the demands of the postsecondary classroom or a career trajectory.

- **Maryland has developed a Voluntary State Curriculum in English that is of high quality and that is well aligned to the ADP English Benchmarks.**

In Quality Review I, the state was advised that great strides toward strong alignment with the ADP Benchmarks had been taken from the original materials considered in February 2006 to the materials reviewed in April of that same year. It was still the case, however, that some recommended steps were necessary to bring the state's expectations into line with the ADP Benchmarks. Most notably, the standards' orientation to the English Core Learning Goals provided a structure that highlighted traditional scholastic writing and reading in a traditional English classroom at the expense of opportunities for authentic "world of work" writing. The April 2007 version of the Maryland VSC thoroughly remedies any prior issues of non-alignment to ADP. All Achieve recommendations regarding the strengthening of the alignment between the ADP Benchmarks for English and the VSC have been addressed. Nowhere is this more obvious than in the addition and refinement of expectations that assure that ADP and the VSC hold parallel, rigorous goals for students.

- **Clear expectations regarding work related skills are provided in the 2007 VSC.**

Maryland has been particularly attentive to Achieve's recommendations to present a clearer focus on such work-related skills as work teams, oral presentations, and peer response.

For example, the state formerly included no match for the ADP Benchmark on work teams (ADP B7). The revised VSC now includes Objective 5.1.2, which aligns to ADP B7. This objective sets a clear set of expectations for group work and is highly aligned to the ADP Benchmark.

Likewise, specific objectives have been added that address oral presentations (Objective 5.2.1) and peer response (Objective 3.2.3).

- **Elements of research and logic that address important aspects of ADP are now included in the 2007 VSC.**

Achieve also recommended in its earlier review that Maryland should consider deepening its research requirements so as to encourage not merely the documentation of inquiry but also the process of searching out relevant information to enlarge one's perspective and understanding on topics. To that end, Objective 3.3.1 speaks clearly to elements of research beyond the mechanics of research that were the focus of the earlier VSC draft. Achieve also recommended a clearer emphasis on logic in the VSC, and the 2007 VSC provides such a section (Objective 2.1.5). Not only do these objectives fully align to ADP, explicit references to the ADP Benchmarks are indicated throughout this new document.

- **Maryland has constructed a list of authors that exemplify the level and types of texts appropriate for secondary classes.**

Based on the Massachusetts model, Maryland has identified a set of recommended authors that provide guidance for the state's English classrooms in terms of identifying appropriate texts for high school students. The Introduction to the list explains the character of the document:

> Following is a representative, though certainly not exclusive, list of authors who have written works of significant literary merit. Works of significant literary merit are memorable; they are worthy of scrutiny because their richness of thought and language challenges the reader and stimulates the imagination. Such works are both instructive and entertaining. They can be read and reread, each reading offering a new insight into the human experience and condition. Through their structure and effect, they communicate across generations and cultures.

- **Maryland has completely reorganized the VSC to produce a cohesive presentation of the discipline.**

A major criticism of the earlier VSC draft by Achieve reviewers concerned the organization of the materials. In that draft, the state tied its organization to the English Core Learning Goals (ECLG). While these goals describe important skills, they tend to overly emphasize the literary aspects of the English curriculum, inhibiting a similar, equal focus on workplace goals. The reviewers recommended that the state consider a more easily accessible structure that would lessen the numerous redundancies and support greater coherence and clarity. The prior organization created many of the issues raised in Quality Review I. The 2007 VSC is now organized in a manner that is accessible, coherent, and better balanced between both literary and informational texts and academic and workplace skills. In this draft, citations are provided that indicate the links between the ECLG and the VSC.

The 2007 VSC is now organized into six strands:

Comprehension and Interpretation of Text
Analysis and Evaluation of Text
Composing
Controlling Language
Speaking
Listening

Although somewhat traditional, this presentation not only allows for easy access to the state's expectations, but also it supports attention to skills beyond the traditional literary curriculum. Formerly noted redundancies are not evident in the new draft, and the document is now much more suited to presenting a clear message to the general public as well as to the academic one as to those skills most valued in a secondary English education.

- **The progression of skills throughout the four years of secondary English now appropriately reflects increasing demands.**

In Achieve's earlier review, reviewers cautioned that the progression of skills described in the 2006 VSC between early and later high school (the grade spans 9 – 10 and 11 – 12) at times presented arbitrary levels of demand, as opposed to descriptions of tasks or skills that were more rigorous. It is obvious from the revised VSC that serious attention was paid to this issue.

Reviewers of the earlier draft conceded that it is a huge challenge to reflect an increasing demand at the secondary levels in English language arts due to the process nature of the discipline's elements. Many of the same skills are used at every grade level, although applied to an increasing complexity of texts—at least in the areas of reading and writing—tasks often increase in complexity due to the complexity of the ideas that one attempts to express. The authors of the 2007 VSC took this advice to heart and have presented a meaningful and logical progression of skills where such a progression is authentic and encourages a level of increasing demand. For those skills that are used at every grade level, such as reading and vocabulary strategies, Objectives apply to all Grades 9 – 12. In other areas that offer increasing demands, Objectives are differentiated for the grade spans 9 – 10 and 11 – 12.

The performances described at the lower grade levels are certainly precursors to the ability to succeed at those tasks described for the higher levels. These descriptions go far beyond the arbitrary and often capricious skill lists that characterize many state English standards, and are evidence of the state's sincere efforts to produce materials that are of high quality and that provide meaningful support for instruction.

- **Most issues of measurability noted in the 2006 VSC have been addressed in the 2007 document.**

The prior VSC included lists of Assessment Limits that identified those elements of the standards that were considered "fair game" for the state level tests. In its earlier review, Achieve reviewers noted many instances where an Assessment Limit would present challenges for measurability,

and Achieve recommended that the state consider reviewing the performances required in some of its Content Targets to increase the potential of effective evaluation of the expectations. The 2007 document includes asterisks to identify those elements of the VSC that are Assessment Limits, the descriptors of what may appear on a state test.

It is important that the state ensure that its recently revised English tests are fully aligned with the VSC in English by making the minor revisions necessary to ensure that the state's Assessment Limits are consistent with the expectations of the VSC. For example, in a prior review, Achieve identified certain objectives that deal with reading strategies as being potentially unsuitable for large-scale testing. Due to the fact that Maryland presently does assess many of these strategies at the state level, these elements have remained unchanged in the new VSC document. In many other cases, however, the verbs have been changed to describe more aptly the desired skill, or the Assessment Limits have been totally revised. For example, an Assessment Limit phrased as "Recognizing the implications of text features" has been revised to "Determine the contributions of text features (e.g., sidebars, time lines, charts, subheadings, diagrams, illustrations, photographs) to the meaning of the text." These changes contribute greatly to clarifying the intent of the expectation.

Conclusion

In conclusion, the *Maryland Voluntary State Curriculum – High School English (April 2007)* present student learning expectations that are intellectually demanding and align well with the ADP Benchmarks. If Maryland students achieve proficiency in the state standards, they will be well prepared for both success in college and the workplace.

Maryland Achieve Quality Review II
Detailed Comments from Mathematics Review Panel
Enclosure B

Documents Reviewed

In this final Quality Review (Phase II), Achieve focused primarily on how the *Maryland Voluntary State Curriculum (VSC) – High School Mathematics,* as amended based on Achieve's earlier analyses, aligns with the Achieve ADP Benchmarks for Mathematics. Achieve took into consideration VSC documents for Algebra/Data Analysis, Geometry, and Algebra II. Additional documents examined include an overview/introductory narrative drafted to explain the purpose and format of the documents and a version of Achieve's Quality Review I report into which Maryland had inserted comments to show how it was addressing issues raised in that earlier analysis. Finally, Maryland provided information on a Web site it has developed to support the implementation of mathematics curriculum and assessment in the state, and this Web site was also examined for this analysis. The proposed revisions to the VSC were supplied by the state in late June 2007 and were made based on months of work undertaken as part of Maryland's participation in the ADP Alignment Institutes.

Review Panel Comments

- **The standards in the *Maryland Voluntary State Curriculum – High School Mathematics,* as amended, are well aligned when compared to the ADP Benchmarks in mathematics.**

Maryland has taken its work to align its state standards with the ADP Benchmarks quite seriously. Each and every comment made as a part of earlier Achieve reviews has been taken into consideration and discussed with various constituencies within the state. The state has responded to Achieve's feedback, in many cases, by making edits and additions to its standards. For example, Maryland has added expectations addressing such data analysis topics as the normal distribution, the distinction between correlation and causation, and differences between randomized experiments and observational studies—topics that were not included in Maryland's original standards. Clarifications and enhancements to existing language have also been made, such as explicit mention of the use of spreadsheets. There are some instances, however, where the state has chosen not to take Achieve's suggestions, and the state has provided a rationale for these decisions that is supported by public feedback. The decision to use publicly-released items on its Web site to clarify the intended level of rigor of the standards—rather than adding more specific language or examples to the standards themselves—is a good example of this. Though the state has not taken all of Achieve's suggestions, it is the case that the Maryland standards are well aligned to the ADP Benchmarks in all areas including Number Sense and Numerical Operations; Algebra; Geometry; Data Interpretation, Statistics, and Probability; and Mathematical Reasoning.

Maryland has expanded and enhanced its VSC in a number of ways—by adding an Algebra II VSC; adding Additional Topics to its Algebra/Data Analysis, Geometry, and Algebra II VSC; including introductory text that clarifies not only format and purpose but also the importance of

problem solving and reasoning processes as well as the use of technology; and developing a Web site that contains—among other things—publicly-released assessment items to help clarify the intended level of rigor of at least some of the VSC. The Algebra II VSC is a critical extension to Maryland's work and essential to the strong alignment of the Maryland standards with the ADP Benchmarks. The Algebra II VSC and the Additional Topics that have been added to each of the three Voluntary State Curricula help extend Maryland's expectations beyond the Algebra/Data Analysis and Geometry expectations that were originally crafted to align with Maryland's state assessment requirements. These two components—the Algebra II VSC and the Additional Topics—help define the *Maryland Voluntary State Curriculum – High School Mathematics* as the expectations the state sets for all high school students. They round out the pre-existing expectations to more fully define what a three-year sequence of mathematics—equivalent to Algebra I, Geometry, and Algebra II—might look like. The new introductory materials clarify for all audiences such things as the role of mathematical processes and technology in the high school classroom.

- **The *Maryland Voluntary State Curriculum – High School Mathematics* is generally clear, specific, coherent, focused, and measurable.**

In addition to rigor, Achieve has several other criteria for high quality standards, which include clarity, specificity, coherence, focus, and measurability. The *Maryland Voluntary State Curriculum – High School Mathematics* fares well with respect to these criteria. The new numbering system for the Additional Topics helps connect and integrate these expectations with the rest of the standards and provides a way to identify them when removed from the context of the document. The organization of the standards around Algebra/Data Analysis, Geometry, and Algebra II provides a clear focus but still offers flexibility to local districts should they choose an alternate configuration. In addition, the layout of the standards—in particular the 3-column format used for Algebra/Data Analysis and Geometry—provides users with a sense of the pre-requisite knowledge and skills that are needed if success in the high school curriculum—including Additional Topics—can be expected. Web-based support materials are essential in clarifying the level of rigor and specificity intended by the standards.

The substance, format, and language of the *Maryland Voluntary State Curriculum – High School Mathematics* are comprehensive and well thought out. A variety of education constituencies have been involved in its development, helping to ensure that the document is useful and addresses the needs of diverse education audiences. At some point in the future, Maryland may want to consider designing a version of its high school standards that is more streamlined and concise so that the general public can grasp the expectations laid out so well in this version targeted for the education community.

- **Maryland has developed ancillary structures to support its standards, including a Web-based Core Learning Goals Toolkit developed and implemented by the Maryland State Department of Education in partnership with local school systems. The organization and infrastructure of this Toolkit is sound, but its substance will need to be expanded to support the new Algebra II VSC and Additional Topics.**

Maryland, upon consultation with its constituencies, has chosen not use more specific language or examples within its standards to clarify their intent. The concern is that adding specificity in such a way might inadvertently narrow the curriculum taught in local school districts by encouraging teachers to teach to specific applications or examples. Rather, the state has opted to rely upon the use of public release items and other support materials contained within a Web-based toolkit. At the present time, the toolkit for Pre-kindergarten – Grade 8 appears to be rich with a variety of resources including lesson plans, lesson seeds, sample assessments, resources, and public release items. Tools for the Core Learning Goal Toolkit for high school are not yet as comprehensive and are still under development—even though skill statements and some public release items (that include student work for constructed-response items) are available. Achieve encourages Maryland to continue with its work in this area and to expand its vision to include public release items, instructional activities, lesson plans, and other exemplars that will support and clarify the Algebra II VSC and the Additional Topics now written into all portions of the VSC. It is important to have public release items and other exemplars—including a variety of activities and assessment items that reflect real-world problem-solving applications, modeling, and algebraic and geometric proof—to demonstrate the full depth and breadth of Maryland's high school expectations

- **Maryland is a partner, along with twelve other states, in working with Achieve to develop an Algebra II end-of-course assessment. In the process of aligning its VSC with the ADP Benchmarks, Maryland has also taken additional steps to ensure that its Algebra II VSC is in alignment with the core standards developed by this cross-state consortium.**

Not only has Maryland taken the step to develop a VSC for Algebra II, but also it has taken steps to ensure that that curriculum aligns with the core Achieve ADP Algebra II End-of-Course Exam Content Standards. Since course standards tend to be more detailed and specific than expectations such as the ADP Benchmarks that define expectations for the end of high school, the End-of-Course Exam Content Standards contain some aspects of content that are not specifically enumerated in the ADP Benchmarks for all students—such as performing operations with complex numbers and understanding higher-order polynomial and rational functions. Maryland has taken steps to incorporate this level of content in its Algebra II VSC to ensure that its students taking the end-of-course exam have had the opportunity to learn the content on which they will be assessed.

- **The *Maryland Voluntary State Curriculum – High School Mathematics* is rigorous, with requirements that occasionally exceed the expectations for ALL students in the ADP Benchmarks and the level of rigor set in the core expectations for the Algebra II End-of-Course Exam. It will be important for Maryland to use its resources, such as its Web-based Core Learning Goal Toolkit to help teachers understand how the depth and breadth of content included in the state's standards can be effectively implemented in Maryland classrooms.**

Maryland's core VSC for Geometry and Algebra II include matrices, a topic not included in the ADP Benchmarks and included in an optional module for the Algebra II End-of-Course Exam. Some Additional Topics included in the VSC—topics that will not be assessed at the state level

for accountability purposes but that are suggested by the state as part of a coherent and rigorous course—also extend beyond the ADP Benchmarks for all students. These include such things as polar coordinates, vectors, perspective drawings, and 3-dimensional coordinate space. Commitment to this level of rigor is admirable, but it will be important for the state to continue its work in providing technical support to teachers, schools, and districts committed to providing this level of rigor to its students.

- **The *Maryland Voluntary State Curriculum – High School Mathematics* will provide a solid basis for local school districts to use as they develop courses and benchmark their existing high school course descriptions to the state standards.**

Maryland's standards are comprehensive and do a good job of integrating non-traditional topics such as data analysis, statistics, probability, and discrete mathematics into the high school curriculum. Such topics are increasingly important in preparing students for college and the world of work. Maryland's VSC should serve the state and its local districts well as guidelines for the development of local curriculum, lesson plans, assessments, and professional development programs for teachers.

Conclusion

The standards defined in the *Maryland Voluntary State Curriculum – High School Mathematics,* as amended, are intellectually demanding and align well with the ADP Benchmarks, indicating that if Maryland students achieve proficiency in the state standards, they will be well prepared for both workplace and college success.